



Cover: Leg phenotypes obtained after a progressive reduction in the dose of Sp family genes in *Drosophila*. Clockwise from top left: wild type, *btd* mutant, *Sp1* mutant, *Sp1* mutant with one mutant copy of *btd* and *Sp1*, *btd* double deletion mutant. See Research article by Córdoba et al. on p. 3623.

MEETING REVIEW

- 3429** Blood stem cells: from beginning to end
Bigas, A. and Waskow, C.

REVIEW

- 3434** Making sense out of spinal cord somatosensory development
Lai, H. C., Seal, R. P. and Johnson, J. E.

STEM CELLS AND REGENERATION

- 3449** Control of germline stem cell differentiation by Polycomb and Trithorax group genes in the niche microenvironment
Li, X., Yang, F., Chen, H., Deng, B., Li, X. and Xi, R.

- 3459** The human PRD-like homeobox gene *LEUTX* has a central role in embryo genome activation
Jouhilahti, E.-M., Madisson, E., Vesterlund, L., Töhönen, V., Krjutškov, K., Plaza Reyes, A., Petropoulos, S., Månsson, R., Linnarsson, S., Bürglin, T., Lanner, F., Hovatta, O., Katayama, S. and Kere, J.

- 3470** Identification, visualization and clonal analysis of intestinal stem cells in fish
Aghaallaei, N., Gruhl, F., Schaefer, C. Q., Wernet, T., Weinhardt, V., Centanin, L., Loosli, F., Baumbach, T. and Wittbrodt, J.

- 3481** Activation of Smad2 but not Smad3 is required to mediate TGF- β signaling during axolotl limb regeneration
Denis, J.-F., Sader, F., Gatien, S., Villiard, É., Philip, A. and Roy, S.

- 3491** Beryllium nitrate inhibits fibroblast migration to disrupt epimorphic regeneration
Cook, A. B. and Seifert, A. W.

RESEARCH REPORT

- 3506** Ebi modulates wing growth by ubiquitin-dependent downregulation of Crumbs in *Drosophila*
Nguyen, M. B., Vuong, L. T. and Choi, K.-W.

RESEARCH ARTICLES

- 3514** Inhibition of Shh signalling in the chick wing gives insights into digit patterning and evolution
Pickering, J. and Towers, M.

- 3522** Vinculin b deficiency causes epicardial hyperplasia and coronary vessel disorganization in zebrafish
Cheng, F., Miao, L., Wu, Q., Gong, X., Xiong, J. and Zhang, J.

- 3532** Brg1 plays an essential role in development and homeostasis of the duodenum through regulation of Notch signaling
Takada, Y., Fukuda, A., Chiba, T. and Seno, H.

- 3540** A novel small molecule that disrupts a key event during the oocyte-to-embryo transition in *C. elegans*
Weicksel, S. E., Mahadav, A., Moyle, M., Cipriani, P. G., Kudron, M., Pincus, Z., Bahmanyar, S., Abriola, L., Merkel, J., Gutwein, M., Fernandez, A. G., Piano, F., Gunsalus, K. C. and Reinke, V.

- 3549** Early formation of the Müllerian duct is regulated by sequential actions of BMP/Pax2 and FGF/Lim1 signaling
Atsuta, Y. and Takahashi, Y.

- 3560** Tbx3 represses *bmp4* expression and, with Pax6, is required and sufficient for retina formation
Motahari, Z., Martinez-De Luna, R. I., Viczian, A. S. and Zuber, M. E.

- 3573** The histone methyltransferase Setd7 promotes pancreatic progenitor identity
Kofent, J., Zhang, J. and Spagnoli, F. M.

- 3582** cAMP-dependent protein kinase A (PKA) regulates angiogenesis by modulating tip cell behavior in a Notch-independent manner
Nedvetsky, P. I., Zhao, X., Mathivet, T., Aspalter, I. M., Stanchi, F., Metzger, R. J., Mostov, K. E. and Gerhardt, H.

- 3591** Complex *cis*-regulatory landscape of the insulin receptor gene underlies the broad expression of a central signaling regulator
Wei, Y., Gokhale, R. H., Sonnenschein, A., Montgomery, K. M., Ingersoll, A. and Arnosti, D. N.

- 3604** Microtubule-severing activity of the AAA+ ATPase Katanin is essential for female meiotic spindle assembly
Joly, N., Martino, L., Gigant, E., Dumont, J. and Pintard, L.

- 3615** Genetic basis for the evolution of organ morphogenesis: the case of *spalt* and *cut* in the development of insect trachea
de Miguel, C., Linsler, F., Casanova, J. and Franch-Marro, X.

- 3623** The evolutionarily conserved transcription factor Sp1 controls appendage growth through Notch signaling
Córdoba, S., Requena, D., Jory, A., Saiz, A. and Estella, C.

TECHNIQUES AND RESOURCES

- 3632** Mapping a multiplexed zoo of mRNA expression
Choi, H. M. T., Calvert, C. R., Husain, N., Huss, D., Barsi, J. C., Deverman, B. E., Hunter, R. C., Kato, M., Lee, S. M., Abelin, A. C. T., Rosenthal, A. Z., Akbari, O. S., Li, Y., Hay, B. A., Sternberg, P. W., Patterson, P. H., Davidson, E. H., Mazmanian, S. K., Prober, D. A., van de Rijn, M., Leadbetter, J. R., Newman, D. K., Readhead, C., Bronner, M. E., Wold, B., Lansford, R., Sauka-Spengler, T., Fraser, S. E. and Pierce, N. A.

CORRECTION

- 3638** Correction: ChtVis-Tomato, a genetic reporter for *in vivo* visualization of chitin deposition in *Drosophila*
Sobala, L. F., Wang, Y. and Adler, P. N.